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ORIGINAL ARTICLE

Initiation of postpartum contraception: A survey among health centre physicians and nurses in Finland

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Abstract
Objective. To examine self-reported professional practices of postpartum contraceptive counselling at Finnish community health centres. *Design*. A survey study with self-administered online questionnaires. *Setting.* All local municipalities (n = 107) in the Expert Responsibility Area of Tampere University Hospital in Western Finland in 2005. *Subjects.* A total of 69 (64% of 107) health centre physicians and 80 (75%) nurses performing postpartum check-ups. *Main outcome measures.* Contraceptive method most often initiated or recommended to breastfeeding women at postpartum visit; timing of postpartum initiation of hormonal and intrauterine contraceptive methods in relation to breastfeeding and resumption of menses. *Results.* The most common contraceptive method initiated or recommended to breastfeeding women by both physicians (41%) and nurses (45%) was the condom, followed by progestin-only pills and intrauterine contraception. Few professionals recommended breastfeeding (lactational amenorrhea) as the only contraceptive method. Only eight (12%) physicians inserted a copper-releasing intrauterine device and five (7%) a levonorgestrel-releasing intrauterine system typically at the postpartum visit; the majority delayed the insertions until the resumption of menses. Fifty-three (77%) physicians initiated combined oral contraceptives mostly when breastfeeding was terminated and menses had returned. Over half of the municipalities involved in the study did not provide any medical contraceptives free of charge postpartum. *Conclusion.* Professionals' reports indicate that initiation of effective contraceptive methods is delayed after childbirth. In order to promote better postpartum contraception practices, updated evidence-based guidelines are needed.

Key Words: *Breastfeeding, contraception, contraceptive agents, nurses, postpartum period, primary care physicians, primary healthcare*

Concerns about inadequate postpartum contraception have been raised around the world [1–3]. In Finland, the risk of induced abortion peaks at six to eight months after childbirth [4], suggesting that contraceptive counselling after delivery may be suboptimal. A Danish study has proposed that short intervals between pregnancies are mostly unplanned [5]. Besides causing psychosocial stress, short intervals are associated with adverse perinatal outcomes [6–8] and maternal health risks [9]. Consequently, clinicians have been advised to recommend at least 12-month intervals between pregnancies [8]. This underscores the importance of effective postpartum contraception.

A high proportion of women resume sexual activity by the sixth postpartum week [3,10]. Non-breastfeeding women may ovulate as early as four weeks after delivery [11]. In breastfeeding women, lactation can serve as a contraceptive method for up to six months, but only if it is full and if menstruation has not returned [10,12]. In Finland the median duration of exclusive breastfeeding is less than two months [13], indicating its limited utility for contraceptive purpose and highlighting the need for other methods.

Virtually all medical contraceptive methods (hormonal and intrauterine contraception) are considered eligible for postpartum use, even though evidence-based data are limited [14]. The only methods that are not recommended by most international guidelines during the first six months of breastfeeding are combined hormonal contraceptives (CHC,

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Postpartum contraception is often suboptimal. Problems with counselling and service provision may be a contributing factor.

- The initiation of intrauterine and hormonal contraceptive methods is unnecessarily delayed.
- Because of the extensive use of condoms for postpartum contraception, it is important that emergency contraception, including intrauterine device, is readily available as a back-up method.
- Updated evidence-based guidelines are needed for postpartum contraception.

including combined oral contraceptives [COCs], vaginal ring, and contraceptive patch) [15,16].

Postpartum visits in primary healthcare settings provide an obvious opportunity for contraceptive counselling [1,10]. In Finland, such visits are made 5–12 (most typically 6–8) weeks after childbirth, usually at the community health centre maternity clinic, which in most cases also provides contraception. If not, maternity clinics cooperate with family planning clinics within the same organization. Both health centre physicians and public health nurses or midwives provide sexual and reproductive health services including contraceptive counselling, but physicians are responsible for initiating medical methods. Various recommendations are in place to support the work of these professionals, such as national directions from 1999 [17] and instructions in the leading Finnish clinical handbook and database [18], but they are not fully consistent.

The purpose of this study was to examine self-reported professional practices of postpartum contraceptive counselling using surveys among health centre physicians and nurses. Special focus was given to the initiation of medical contraceptive methods in relation to breastfeeding and the resumption of menses.

Material and methods

The survey was conducted between September 2005 and January 2006 in the Expert Responsibility Area of Tampere University Hospital in Western Finland as part of a larger survey on sexual health services [19]. At the time the area comprised 107 local municipalities (including towns of different sizes and sparsely populated rural areas) and 63 community health centre organizations (henceforth health centres), each run by one local authority or a joint municipal board representing up to six municipalities. Together, these organizations provided primary healthcare services to one-fifth of the Finnish population.

To identify and recruit physicians and nurses most closely involved in providing family planning services, a simple electronic questionnaire was sent to each health centre. In cases where a health centre served several local municipalities, one physician and one nurse were recruited to represent each municipality. In those municipalities that provided family planning services in multiple locations (n = 15), more than one professional was recruited. Invitations to participate in the study were e-mailed to 122 physicians and 128 nurses together with a link to the online questionnaire, which included structured and open questions as well as space for any additional information. The wordings of the questions are given in the Tables and in the Results.

After two reminders, 83 (68%) physicians and 118 (92%) nurses responded. Among them, 69 physicians and 92 nurses performed postpartum check-ups and from their responses, one physician's and one nurse's response (usually of a professional working in the largest health station) for each local municipality were included in the analysis, resulting in 62 and 79 responses, respectively. In addition, three physicians and one nurse served more than one (two to six) municipality, and their responses were multiplied to represent each of them. Thereafter, the physicians' responses represented 69 (64%) and nurses' 80 (75%) of all 107 municipalities in the study area. In all, responses were obtained (either from a physician or a nurse) from 94 (88%) municipalities.

The data were analysed with SPSS for Windows Version 13.0. The results are given as frequencies, means, and medians.

Results

The mean age of the physicians was 44.6 (range 26–62) and that of nurses 47.7 years (28–61). Half of the physicians were specialists in general practice (Table I). In seven municipalities the physician was a specialist in obstetrics and gynaecology. One-third of the nurses had qualified both in public health nursing and midwifery. The majority of the professionals had more than 10 years' experience of work at health centres. The municipalities involved had an average population of 9961, the median being 5683 (range 1291–98,413).

The contraceptive method most often initiated or recommended for breastfeeding women at postpartum visit by both physicians and nurses was the condom, followed by progestin-only pills (POPs), copper-releasing intrauterine device (IUD), and

Table I. Background characteristics of respondents.

	Physicians n=69 n (%)	Nurses n=80 n (%)
Age (years)		
<40	20 (29)	11 (14)
40–49	35 (51)	34 (43)
≥50	14 (20)	35 (44)
Sex		
Female	59 (85.5)	80 (100)
Male	10 (14.5)	0 (0)
Specialist training		
Specialist in general practice	34 (49)	
Trainee in general practice	5 (7)	
Other specialist degree	8 (12)	
Non-specialist	20 (29)	
Missing information	2 (3)	
Nurse education (multiple choice)		
Public health nurse		77 (96)
Midwife		32 (40)
Both		29 (36)
Specific training in sexual health counselling	0 (0)	3 (4)
Work experience at health centre, years		
0-10	23 (33)	18 (22.5)
>10	46 (67)	62 (77.5)

levonorgestrel-releasing intrauterine system (LNG-IUS) (Table II). Responses to the question "Do you recommend breastfeeding as the only contraceptive method?" were as follows: three (4%) physicians and none of the nurses said "Yes, sometimes"; 10 (15%) physicians and 10 (13%) nurses said "Yes, but rarely"; and 56 (81%) physicians and 69 (86%) nurses said "Never". None of the professionals reported recommending breastfeeding as the only method of contraception "often". There was one missing nurse response (1%).

Most physicians initiated POPs irrespective of breastfeeding or menstruation (Table III), but usually started CHC when breastfeeding was finished and menses had returned. There was more variation in the timings of IUD and LNG-IUS insertions, but the majority of physicians would not use these methods unless menses had resumed. Furthermore, 30% of the physicians waited for the termination of breastfeeding before inserting LNG-IUS.

According to the nurses, over half of the municipalities involved did not provide any medical contraceptives (oral contraceptives [OCs], vaginal ring/contraceptive patch, IUD or LNG-IUS) free of charge postpartum (Table IV). Among the municipalities that did provide free contraceptives, the most common method was OCs.

Table II. Contraceptive methods most commonly initiated or recommended[1] for breastfeeding women at postpartum visit by physicians and nurses representing 69 and 80 municipalities in primary care, respectively.

	Physicians n (%)	Nurses n (%)
Condom	28 (41)	36 (45)
Progestin-only pills	23 (33)	22 (28)
Copper-releasing intrauterine device	10 (15)	7 (9)
Levonorgestrel-releasing intrauterine system	3 (4)	4 (5)
Missing information	5 (7)	11 (14)

Notes: [1]Open questions, (1) physicians: "Which contraceptive method do you initiate or recommend most commonly to a breastfeeding mother at postpartum visit?", (2) nurses: "Which contraceptive method do you recommend most commonly to a breastfeeding mother at postpartum visit?".

Forty-nine (71%) physicians reported that their health centre was prepared to provide IUD insertion as emergency contraception. Among nurses, 31 (39%) said this was possible and 21 (26%) were not aware of the health centre's policy.

Discussion

According to the physicians and nurses in this study, the condom was the prime contraceptive method for breastfeeding women making postpartum counselling visits. Only a few of these experienced professionals recommended breastfeeding as the only contraceptive method. With the exception of progestin-only pills, the initiation of medical contraceptive methods was often postponed until breastfeeding was terminated and menses had returned. Contraceptives were supplied free of charge postpartum in less than half of the municipalities involved.

We were unable to locate any comparable previous research describing professional practices of initiating postpartum contraception. However, postpartum use of contraceptive methods has been studied in various populations [1–3,20–22]. The use of different methods varies markedly from one country to another. Intrauterine contraception seems to be more frequent in Finland than in some other Western countries [1,20]. Our findings regarding the popularity of condom use and the late initiation of medical contraceptives are consistent with an earlier Finnish report on contraceptive use after delivery [23] and with unpublished data available. Even though reports from other countries are not available for direct comparisons, studies on postpartum contraceptive use suggest that medical methods are initiated earlier in many other countries [1,3,20–22].

Table III. Usual timings of postpartum initiation of medical contraceptive methods by physicians representing 69 municipalities in primary care.

Alternatives	POPs n (%)	IUD n (%)	LNG-IUS n (%)	Implants n (%)	COCs n (%)	Ring/patch n (%)
Postpartum visit	19 (28)	8 (12)	5 (7)	1 (1)	0 (0)	0 (0)
Before resumption of menses, irrespective of BF	32 (46)	20 (29)	18 (26)	15 (22)	0 (0)	1 (1)
Menses resumed, irrespective of BF	8 (12)	37 (54)	22 (32)	4 (6)	0 (0)	1 (1)
BF finished, irrespective of resumption of menses	1 (1)	0 (0)	2 (3)	3 (4)	15 (22)	15 (22)
BF finished and menses resumed	5 (7)	3 (4)	21 (30)	16 (23)	53 (77)	50 (73)
Never	3 (4)	1 (1)	1 (1)	24 (35)	1 (1)	1 (1)
Cannot say or missing information	1 (1)	0 (0)	0 (0)	6 (9)	0 (0)	1 (1)

Note: "When do you usually initiate the following contraceptive methods postpartum?" POP_S=progestin only pills, IUD=copper releasing intrauterine device, LNG-IUS=levonorgestrel-releasing intrauterine system, COCs=combined oral contraceptives, BF=breastfeeding.

The repertoire of postpartum contraceptive methods applied here was appropriate. Indeed, the problems discovered relate to the timing of the initiation of different methods. Only a few physicians reported a practice of IUD or LNG-IUS insertion at postpartum visits. International guidelines consider intrauterine contraception appropriate from four weeks after delivery [15,16] but the most important Finnish ones from six to eight weeks onwards [17,18]. Moreover, some experts recommend awaiting resumption of menses or until six months postpartum, stressing that there would be an increased risk of uterine perforation earlier, especially during breastfeeding [24,25]. Even though the subject has been controversial, there is evidence that earlier insertions without waiting for the first menses (even from four weeks postpartum) would be safe, especially if carried out by experienced professionals [26,27].

Combined hormonal contraception could also be started earlier. Most physicians did not initiate CHC until menses had resumed, even if breastfeeding had ended. However, the first ovulation may occur before menstruation resumes even in lactating women [28]. This favours the initiation of CHC use immediately after the termination of breastfeeding. Also, current guidelines accept CHC use during lactation from six months postpartum [15,16], because no adverse effects on child health or development have been described or potential negative effects on lactation confirmed so far [29].

Most professionals said they never recommended breastfeeding as the only method of contraception. The result is in line with the findings of a Scottish study among postpartum women [1]. The lactational amenorrhea method (LAM) could benefit both mother and infant by enhancing breastfeeding and serving as an "introductory method" to medical contraception [30]. However, from this point of view the postpartum visit may come too late. Indeed information on LAM should be given during prenatal

Table IV. Supply of contraceptives free of charge postpartum by nurses representing 80 municipalities in primary care.

Contraceptive methods available free of charge	n (%)	Quantity of supplies (months)	Mean	Median	Range
Oral contraceptives (OCs)	33	(41%)	4	3	3 – 9
Vaginal ring or patch	23	(29%)	4	3	3 – 9
Copper-releasing intrauterine device (IUD)	20	(25%)			
Levonorgestrel-releasing intrauterine system (LNG-IUS)	0	(0%)			
Number of contraceptive methods available free of charge					
One method					
OCs	5	(10%)			
IUD	1	(2%)			
Two methods					
OCs and ring/patch	9	(14%)			
OCs and IUD	4	(6%)			
Three methods (OCs, ring/patch, IUD)	14	(18%)			
No methods available	45	(56%)			
Missing information	2	(3%)			

Note: Data extracted from multiple-choice questions "In which situations (and OCs, ring/patch: for how long) can a client receive OCs/vaginal rings or contraceptive patches/IUD/LNG-IUS free of charge", response option "Postpartum" ("Yes"/"No").

visits at maternity clinics, emphasizing that all three criteria of the method must be met to achieve contraceptive effect [10].

Because of the extensive use of condoms for postpartum contraception, it is important that emergency contraception (EC) is readily available as a back-up method. Hormonal EC (available over the counter in Finland) is not contraindicated during breastfeeding [15], but if it is delayed EC using IUD is effective at least up to five days after intercourse [31]. Our results suggest that physicians in Finland may be compliant with inserting IUDs with this indication, but established practices are lacking at many health centres.

This survey involved physicians from 69 and nurses from 80 municipalities out of a total of 107 in a large hospital district. We were unable to reach maternity care professionals from each municipality, because the study primarily involved family planning services instead of maternity care. However, most of the respondents also worked at maternity clinics [32] and performed postpartum check-ups.

We extracted one physician's and one nurse's response for each local municipality in the analysis, which may create selection bias. Nevertheless, the physician's response was to be selected in only six and the nurse's in seven municipalities. The selected responses were also compared with other responses from the same municipality and adjusted to them if markedly divergent.

It is noteworthy that our research focused on professionals' reports of their practices, not on their actual performance. Their responses, therefore, may have been affected by social desirability bias. However, the responses from both physicians and nurses (including the results concerning the timing of the initiation of contraceptive methods not shown here, and excluding EC with IUD) were very uniform, which supports our view that the results do reflect actual clinical practices.

The responses may also have been affected by the use of structured questions. It is obviously difficult to reduce the management of a complex clinical counselling situation into one structured response. The respondents were therefore especially encouraged to use the open spaces in the questionnaires to add explanatory comments, which were then used to interpret the responses where relevant. All in all, we suggest that this study provides a good general overview of postpartum contraceptive practices in public primary healthcare services in the study area and also reflects practices elsewhere in Finland.

To conclude, timing of the initiation of contraception after childbirth is critical when aiming to avoid unplanned pregnancies. Professionals' reports indicate that initiation of medical contraceptive methods is delayed after childbirth. In the light of the guidelines effective contraceptive methods could be initiated earlier postpartum. The results of our study lend support to many of the ideas put forward in the 2007 national action programme for the promotion of sexual and reproductive health in Finland [33], including continuing medical training for health professionals and the formulation of updated national guidelines for contraception. Despite challenges in implementation and adherence [34,35], evidence-based guidelines offer a basis for modern clinical performance. The programme also states, like earlier national instructions, that the first postpartum contraceptive method should be provided free of charge, which was not the case in the majority of the municipalities in our study.

However, even if contraceptive counselling and availability are optimized, woman's views and decisions on postpartum contraception are influenced by a number of other factors, such as recovery from delivery, contraceptive experiences and preferences, the resumption of sexual activity, and, importantly, desire for a subsequent pregnancy. Qualitative studies could help to shed more light on these factors.

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